

Kevin Starr  
Allegheny Coatings  
302 McSwain Drive  
Fremont, Indiana 46737

Re: Registered Construction and Operation Status,  
151-12144-00054

Dear Mr. Starr:

The application from Allegheny Coatings, received on April 6, 2000 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the new plant which consists of the following equipment that will be used to coat various steel and cast iron automotive components, is classified as registered. This plant will be located at 302 McSwain Drive Fremont, Indiana 46737.

- (a) One (1) natural gas-fired alkaline spray washer stage 1, with a heat input rate of 2.0 million British Thermal Units (mmBtu/hr), and a capacity of 300 gallons, exhausting to stack E1;
- (b) One (1) natural gas-fired alkaline spray washer stage 3, with a heat input rate of 2.0 mmBtu/hr, and a capacity of 300 gallons, exhausting to stack E2;
- (c) One (1) natural gas-fired alkaline spray washer stage 3, with a heat input rate of mmBtu/hr, and a capacity of 300 gallons exhausting to stack E3;
- (d) Two (2) evaporators, identified as EV-6 and EVC-6 processing wash water overflow, with a heat input rate of 0.4 mmBtu/hr and 0.285 mmBtu/hr respectively;
- (e) Spray line 6, with four (4) booths, identified as paint booth 1, paint booth 2, paint booth 3 and paint booth 4. Each paint booth is equipped with air atomization spray application system. The PM overspray from each paint booth will be controlled by dry filters;
- (f) One (1) natural gas-fired curing oven preheat zone identified as CO-6, with a heat input capacity of 2.5 mmBtu/hr, exhausting to stack E5;
- (g) One (1) natural gas-fired curing oven high heat identified as CO-6, with a heat input capacity of 6.5 mmBtu/hr, exhausting to stack E6; and
- (h) One (1) natural gas-fired infrared curing oven identified as IR-6, with a heat input capacity of 1.35 mmBtu/hr, exhausting to stack E8.

The following conditions shall be applicable:

**D.1.1 Opacity Limitations**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

**D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

Pursuant to 326 IAC 6-3-2(c), the PM overspray emissions from Spray Line 6 (consisting of paint booths 1 thru 4) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

**D.1.3 Volatile Organic Compounds [326 IAC 8-2-9]**

Any change or modification which may increase the actual VOC emissions to 15 pounds per day or more from the Spray Line 6 (consisting of paint booths 1 thru 4) in this registration must be approved by the Office of Air Management (OAM) before such change may occur, and shall be subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating).

This registration is the first air approval issued to this source.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to (326 IAC 2-5.1-2(f)(3)). The annual notice shall be submitted to:

Compliance Data Section  
Office of Air Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

APD

cc: File - Steuben County  
Steuben County Health Department  
Air Compliance - Doyle Houser  
Northern Regional Office  
Permit Tracking - Janet Mobley  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

<b>Registration Annual Notification</b>
---

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3)

<b>Company Name:</b>	<b>Allegheny Coatings</b>
<b>Address:</b>	<b>302 McSwain Drive</b>
<b>City:</b>	<b>Fremont</b>
<b>Authorized individual:</b>	<b>Kevin Starr</b>
<b>Phone #:</b>	<b>(219) 665-1600</b>
<b>Registration #:</b>	<b>151-12144-00054</b>

I hereby certify **Allegheny Coatings** that is still in operation and is in compliance with the requirements of Registration **151-12144-00054**.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**Indiana Department of Environmental Management  
Office of Air Management**

**Technical Support Document (TSD) for a New Source Construction and  
Registration**

**Source Background and Description**

Source Name: Allegheny Coatings  
Source Location: 302 McSwain Drive, Fremont, Indiana 46737  
County: Steuben  
SIC Code: 3479  
NSR/Registration: 151-12144-00054  
Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Allegheny Coatings relating to the construction and operation of a new plant that will coat various steel and cast iron automotive components: The plant will consists the following equipment:

- (a) One (1) natural gas-fired alkaline spray washer stage 1, with a heat input rate of 2.0 million British Thermal Units (mmBtu/hr), and a capacity of 300 gallons, exhausting to stack E1;
- (b) One (1) natural gas-fired alkaline spray washer stage 3, with a heat input rate of 2.0 mmBtu/hr, and a capacity of 300 gallons, exhausting to stack E2;
- (c) One (1) natural gas-fired alkaline spray washer stage 3, with a heat input rate of mmBtu/hr, and a capacity of 300 gallons, exhausting to stack E3;
- (d) Two (2) evaporators, identified as EV-6 and EVC-6 processing wash water overflow, with a heat input rate of 0.4 mmBtu/hr and 0.285 mmBtu/hr respectively;
- (e) Spray line 6, with four (4) booths, identified as paint booth 1, paint booth 2, paint booth 3 and paint booth 4. Each paint booth is equipped with air atomization spray application system. The PM overspray from each paint booth will be controlled by dry filters;
- (f) One (1) natural gas-fired curing oven preheat zone identified as CO-6, with a heat input capacity of 2.5 mmBtu/hr, exhausting to stack E5;
- (g) One (1) natural gas-fired curing oven high heat identified as CO-6, with a heat input capacity of 6.5 mmBtu/hr, exhausting to stack E6; and
- (h) One (1) natural gas-fired infrared curing oven identified as IR-6, with a heat input capacity of 1.35 mmBtu/hr, exhausting to stack E8.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
E1	Spray washer stage 1 burner	28	0.5	2,000	700
E2	Spray washer stage 3 burner	28	0.5	2,000	700
E3	Spray washer stage 5 burner	28	0.5	1,350	700
E4	Spray washer blowoff burner	28	1.0	1,300	400
E5	Curing oven preheat zone	28	1.0	1,000	500
E6	Curing oven high heat zone	28	1.0	2,500	950
E7	Cleanup station evaporator	28	0.83	285	220
E8	Infrared oven	28	1.0	600	800
E9	Spray line paint booth 1	29	2.0	330	100
E10	Spray line paint booth 2	28	2.0	330	100
E11	Spray line paint booth 3	28	2.0	330	100
E12	Spray line paint booth 4	28	2.0	330	100
E13	Spray washer entrance exhaust	28	1.17	2,000	160
E14	Spray washer exit exhaust	28	1.17	2,000	160
E15	Spray wash water evaporator	28	1.33	400	220

## Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on April 6, 2000.

## Emission Calculations

- (a) Natural Gas Combustion Emissions: See Page 1 of 2 TSD Appendix A for detailed calculations.
- (b) Spray Booths Emissions: See Page 2 of 2 TSD Appendix A for detailed calculations.

## Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	7.8
PM-10	8.2
SO <sub>2</sub>	0.0
VOC	3.1
CO	6.0
NO <sub>x</sub>	7.2

#### Justification for the Level of Approval

The new plant is being reviewed pursuant to 326 IAC 2-5.1-2 (Registration), because the sourcewide potential to emit of either particulate matter (PM) or particulate matter less than ten microns (PM10) is less than 25 tons per year but greater than 5 tons per year.

#### Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Combustion Emissions	0.1	0.5	0.0	0.4	6.0	7.2	0.0
Spray Booths	0.768	0.768	0.0	2.69	0.0	0.0	0.0
Total Emissions	0.9	1.3	0.0	3.1	6.0	7.2	0.0

## County Attainment Status

The source is located in Steuben County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Steuben County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Steuben County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.9
PM10	1.3
SO <sub>2</sub>	0.0
VOC	3.1
CO	6.0
NO <sub>x</sub>	7.2
Single HAP	0.0
Combination HAPs	0.0

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

## Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,  
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and  
(c) any combination of HAPs is less than 25 tons/year.



This is the first air approval issued to this source.

### **Federal Rule Applicability**

- (a) New Source Performance Standards (NSPS)  
There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)  
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

### **State Rule Applicability - Entire Source**

- (a) 326 IAC 2-6 (Emission Reporting)  
The new source is not subject to this rule, because it doesn't have a PTE for any pollutant at levels equal to or greater than 100 tons per year. Secondly, it is not subject to this rule because it is not located in any of the counties listed in the rule that has a PTE of VOC or NOx at levels equal to or greater than 10 tons per year.
- (b) 326 IAC 5-1 (Visible Emissions Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability - Individual Facilities**

- (a) 326 IAC 8-2-9 (Miscellaneous Metal Coating)  
The spray line 6, which consists of paint booth 1, 2, 3 and 4 spray coat various steel and cast iron automobile components. This spray line is not subject to this rule because its actual VOC emissions are less than 15 pounds per day (see Page 2 of 2 TSD Appendix A for detailed calculations).
- (b) 326 IAC 8 (Volatile Organic Sources)  
There are no other rules in Article 8 that will possibly apply to this various steel and cast iron automotive components coating operation.
- (c) 326 IAC 6-3-2 (Process Operations)  
This rule mandates a PM overspray emissions limit for the spray line 6 (consisting of paint booth 1 through 4) using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in place at all times, the Spray Line 6 (consisting of paint booths 1

thru 4) is in operation, in order to comply with this limit.

- (d) 326 IAC 2-4.1-1 (New Source Toxic Control)  
This rule applies to owners or operators who constructs or reconstructs a major source of hazardous air pollutants (HAPs), after July 27, 1997.

This rule is not applicable to the new plant because it doesn't emit any hazardous air pollutant (HAP).

## Conclusion

The construction and operation of this steel and cast iron automotive components coating operation shall be subject to the conditions of the attached proposed **New Source Construction/Registration 151-12144-00054**.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Small Industrial Boiler**

Page 1 of 2 TSD App A

**Company Name** Allegheny Coatings

**Address City** 302 McSwain Dr., Fremont, IN 46737

1 spray washers stage 5 - 1.35 mmBtu/hr **Registration ID** 151-12144-00054

1 spray washers stage 3 - 2 mmBtu/hr **Reviewer:** Aida De Guzman

1 spray washers stage 1 - 2 mmBtu/hr **Date:** April 12, 2000

1 infrared curing oven - 1.35 mmBtu/hr

1 curing oven preheat - 2.5 mmBtu/hr

1 curing oven high heat - 6.5 mmBtu/hr

1 evaporator - 0.4 mmBtu/hr

1 evaporator - 0.285 mmBtu/hr

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

16.4

143.5

**Pollutant**

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.5	0.0	7.2	0.4	6.0

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
above  
emission

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Name** Allegheny Coatings  
**Address City** 302 McSwain Dr., Fremont, IN 46737  
**Registration I** 151-12144-00054  
**Reviewer:** Aida De Guzman  
**Date:** April 12, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
<b>Spray Line 6 Paint Booth 1</b>																
Dacromet 320 LV	11.4	62.20%	56.9%	5.3%	77.6%	10.60%	0.00170	600.000	2.69	0.60	<b>0.61</b>	<b>14.74</b>	<b>2.69</b>	4.80	5.68	75%
Sermagard 1105	12.5	45.00%	45.0%	0.0%	73.0%	27.00%	0.00170	600.000	0.00	0.00	0.00	0.00	0.00	<b>7.68</b>	0.00	75%
<b>Spray Line 6 Paint Booth 2</b>																
Dacromet 320 LV	11.4	62.20%	56.9%	5.3%	77.6%	10.60%	0.00170	600.000	2.69	0.60	0.61	14.74	2.69	4.80	5.68	75%
<b>Spray Line 6 Paint Booth 3</b>																
Dacromet 320 LV	11.4	62.20%	56.9%	5.3%	77.6%	10.60%	0.00170	600.000	2.69	0.60	0.61	14.74	2.69	4.81	5.70	75%
Sermagard 1105	12.5	45.00%	45.0%	0.0%	73.0%	27.00%	0.00170	600.000	0.00	0.00	0.00	0.00	0.00	7.68	0.00	75%
<b>Spray Line 6 Paint Booth 4</b>																
Plus L	9.5	79.00%	79.0%	0.0%	75.0%	25.00%	0.00170	600.000	0.00	0.00	0.00	0.00	0.00	2.23	0.00	75%
Plus L	9.8	74.00%	74.0%	0.0%	85.0%	15.00%	0.00170	600.000	0.00	0.00	0.00	0.00	0.00	2.85	0.00	75%

**State Potential Emissions**

**Add worst case coating to all solvents**

**0.61                      14.74                      2.69                      7.68**  
Note: Only one (1) paint booth can be operated at any given time.

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)